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December 7, 1999

EXPRESS MAIL LABEL NO. EL096150361US

Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D. C. 20231

Dear Sir:

Transmitted herewith for filing is the patent application of:

Inventor: Dr. Jürgen Engelbrecht

For: ADHESIVE SYSTEM FOR SILICONES

Our File No. 452948-1

Enclosed are the following papers:

- (X) Specification with attached Declaration (unsigned)
- () Specification without attached Declaration
- () Formal drawings
- () Informal drawings (3 sets)
- () Prior Art Statement under 37 C.F.R. §1.97
- () Preliminary Amendment

CERTIFICATE OF EXPRESS MAIL UNDER 37 CFR 1.10

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Brian J. Laurenzo

(Print or type name)

(Signature)

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- (X) An Assignment of the invention in favor of the following organization will follow:

S & C Polymer, Silicon- und Composite-Spezialität GmbH

Any notice that is to be furnished to the above organization after grant of the patent should be addressed to the firm of the undersigned. Any notice for any other reason should be addressed to the organization with the notation, "Attention: Office of the President".

- () Payment enclosed herewith includes a \$40.00 assignment recordation fee.
- (X) Priority is hereby claimed based upon the following application:

DE 199 16 131.3 filed April 9, 1999.

- (X) The total amount due for the filing fee in this case is:

Basic filing fee, \$760 (\$380, small entity)	\$ 380.00
Independent Claims in excess of 3, \$78.00 each (\$39, small entity)	\$
Total Claims in excess of 20, \$18.00 each (\$9, small entity)	\$ 45.00
Multiple dependent claims, \$260.00 each (\$130, small entity)	\$
Assignment, \$40	\$

GRAND TOTAL DUE **\$ 425.00**

- (X) Where a 50% fee reduction is indicated in the calculation in the preceding paragraph, documentation making this claim under 37 C.F.R. §1.9(f) is attached.
- (X) Our payment is included in the amount of the GRAND TOTAL DUE in the following manner:
- (X) Our check in the full amount is included.

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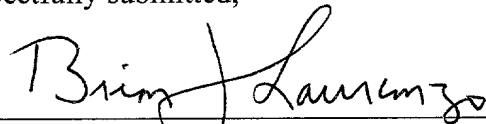
December 7, 1999

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- (X) The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 04-1420.
- (X) Deposit Account Authorized: In the event no specific fee has been authorized above or if a check is detached or misplaced, the Commissioner is authorized to charge the entire Basic Filing Fee of \$380.00 to our Deposit Account No. 04-1420, and unless it is indicated that the "additional fees" are being deferred under 35 USC §41(a), the said Commissioner is authorized to charge the GRAND TOTAL DUE to said Deposit Account. Any adjustment in the GRAND TOTAL DUE should be made to our Deposit Account No. 04-1420.
- (X) General Authorization. This paper constitutes a general authorization to the Commissioner for all fee requirements subsequent to the instant filing to charge all fees for amendments, petitions, and any and all other papers, to our Deposit Account No. 04-1420. This is not, however, an automatic authorization to mail a Notice of Allowance with a charge of the Issue Fee.

Respectfully submitted,

By:



Brian J. Laurenzo

Registration No. 34,207

ATTORNEY FOR APPLICANT

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Applicant: Dr. Jürgen Engelbrecht
Serial No.: To be assigned
Filed: November 17, 1999
For: ADHESIVE SYSTEM FOR SILICONES

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) and 1.27(b)) - INDEPENDENT INVENTOR**

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled ADHESIVE SYSTEM FOR SILICONES described in

- ☒ (X) the specification filed herewith
☐ () application serial no. _____, filed _____
☐ () patent no. _____, issued _____

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☐ () no such person, concern or organization
☒ (X) persons, concerns or organizations listed below*

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME S & C Polymer, Silicon- und Composite-Spezialität GmbH
ADDRESS Robert-Bosch-Strasse 5, 25335 Elmshorn, Germany
☐ () INDIVIDUAL ☐ () SMALL BUSINESS CONCERN ☐ () NONPROFIT ORGANIZATION

FULL NAME _____
ADDRESS _____
☐ () INDIVIDUAL ☐ () SMALL BUSINESS CONCERN ☐ () NONPROFIT ORGANIZATION

FULL NAME _____
ADDRESS _____
☐ () INDIVIDUAL ☐ () SMALL BUSINESS CONCERN ☐ () NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

DR. JÜRGEN ENGELBRECHT
Name of Inventor

Signature

Date

Applicant: Dr. Jürgen Engelbrecht
Serial No.: To be Assigned
Filed: November 17, 1999
For: ADHESIVE SYSTEM FOR SILICONES

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 C.F.R. 1.9(f) and 1.27(c) - SMALL BUSINESS CONCERN)**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:
☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN: S & C Polymer, Silicon- und Composite-Spezialität
ADDRESS OF CONCERN: Robert-Bosch-Strasse 5, 25335 Elmshorn, Germany

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 C.F.R. 121.3-18, and reproduced in 37 C.F.R. 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled ADHESIVE SYSTEM FOR SILICONES by inventor Dr. Jürgen Engelbrecht described in

- ☒ the specification filed herewith
☐ application Serial No. _____, filed _____
☐ patent No. _____, issued _____

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 C.F.R. 1.9(d) or by any concern which would not qualify as a small business concern under 37 C.F.R. 1.9(d) or a nonprofit organization under 37 C.F.R. 1.9(e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities (37 C.F.R. 1.27).

FULL NAME: _____
ADDRESS: _____
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME: _____
ADDRESS: _____
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Name of Person Signing: _____
Title of Person Other Than Owner: _____
Address of Person Signing: Robert-Bosch-Strasse 5, 25335 Elmshorn, Germany

Signature _____

Date: _____

ADHESIVE SYSTEM FOR SILICONES

Technical Field

The present invention relates to a kit which has a) at least one partially resolvable (co-) polymer, b) at least one adhesive for silicones, c) optionally a base body, and d) optionally a silicone composition. The instant invention also relates to a method of manufacturing a molding using the parts in the aforementioned kit.

Background of the Invention

Impressions using impression compositions especially in the field of dentistry often require the use of so-called individually formed impression trays. Individual impression trays are individually manufactured moldings in the form of an impression tray, which are manufactured, for example, from self-curing mixtures of methyl methacrylate/polymethyl methacrylate or from photo-curable composite plates (consisting of multifunctional photo-curable (meth-)acrylate mixtures to which glass powder has been added), in dental applications called "photo-curable individual impression tray plates."

Silicones are usually used as impression compositions in the field of dentistry. The bond between the impression trays and silicones poses a problem, however: silicones do not by themselves adhere to plastics or composites. Nonetheless, in order to provide adhesion between silicone impression compositions and impression trays, attempts were firstly made to anchor the impression compositions stably in the impression tray, and to prevent them from lifting out of the impression tray after the impression has been taken, with the aid of mechanical retaining means, such as holes, undercuts, bent-round rims, etc., that is to say by purely mechanical means.

Attempts were also made to improve the adhesion of the silicone compositions to impression trays by molecular/mechanical means with the aid of solutions of viscous silicone polymers. Generally such silicone impression tray adhesives are solutions of only partially crosslinked silicones in volatile solvents. Since no direct chemical bonding occurs between the silicone impression composition and the partially crosslinked silicone polymers of the impression tray adhesive, those adhesives can be used both for silicone impression compositions that are crosslinked by condensation and for those crosslinked by addition.

Both above-mentioned measures for better adhesion of the silicone impression compositions to the impression trays, however, provide unsatisfactory solutions: it is especially difficult to introduce mechanical retaining means into individually manufactured impression trays since they must be produced, for example, subsequently by boring. In the case of such rigid trays, boring also easily results in stress cracks; in addition, too many mechanical retaining holes weaken the impression trays' breaking strength and resistance to bending.

The commercially available solvent-containing viscous adhesives have only an auxiliary adhesive action: in the case of relatively strong tensile forces on removal of the impression from the object of which the impression is to be taken, such as a tooth, the silicone impression lifts up from the impression tray and becomes deformed and the viscous adhesive comes away with many drawn-out threads being formed. The deformation of the impression easily results in defective fittings.

It has been known for a short time that adhesives that are used to bind non-hardening silicone re-lining materials securely to plastics for prostheses (e.g. accompanying Patent Application DE 199 05 224.7, Patent Application DE 196 35 696 A1 or Patent Specification EP 0 632 063 A1) also adhere excellently to impression trays that are slightly partially soluble. Partially soluble trays are, for example, trays made of polystyrene, polycarbonate, on monomer/polymer-based individual impression trays, such as, for example, those made of methyl methacrylate/polymethyl methacrylate, such adhesives can result in good adhesion of the silicone impression composition to precisely that type of individual impression trays.

It is problematic, however, to produce good adhesion of silicones to the surface of crosslinked methacrylates, especially to individual photo-curable impression trays based on a methacrylate composite, which are used in large numbers. The mentioned new adhesion primers for silicones fail on those types of polymerized kits.

Summary of the Invention

The problem underlying the invention was therefore to provide a kit of parts that enables a reliable easy-to-produce bond between impression trays, such as impression trays consisting of methacrylate composites and especially special photo-curable individual impression trays, and

silicone compositions, the bond being approximately as strong as the cohesion of the silicone composition itself.

Detailed Description of the Invention

According to the invention the problem is solved by a kit of parts comprising a) at least one partially resoluble (co-)polymer, b) at least one adhesive for silicones, c) optionally a base body, and d) optionally a silicone composition.

According to the invention, the base body may comprise or consist of polymers or copolymers of methacrylates. It may be a composite body and may additionally comprise fillers, such as glass powder.

The optionally comprised base body may be an impression tray, especially an individually manufactured impression tray and more especially an individually manufactured photo-curing impression tray. The base body may also be a dental crown or bridge or a temporary crown or bridge.

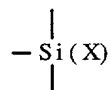
The soluble or partially (re-)soluble (co-)polymers may be or comprise, for example, polystyrene, polycarbonate, poly(meth-)acrylate, polyvinyl chloride, polysulphone, polymethylpentene or polystyrene acrylonitrile or mixtures thereof, the poly(meth-)acrylates preferably being polymers or mixed polymerisates of methyl, ethyl, propyl, butyl, neopentyl or tetrahydrofurfuryl esters of acrylic acids or methacrylic acids, on account of their being chemically related to the crosslinked methacrylates.

In principle, however, any soluble or partially (re-)soluble polymer is suitable that can bond with sufficient strength to (co-)polymerized base bodies, especially based on dimethacrylates or other multifunctional methacrylates to which fillers have been added or containing no fillers. A bond is sufficiently strong when it has an adhesive strength of at least 50%, more especially of at least 90% and most especially of at least 100% of the cohesive strength of the impression composition used.

The adhesive for silicones may be a (co-)polymer or a mixture of (co-)polymers containing SiH or vinyl groups; it is especially preferred for the (co-)polymer or the mixture of (co-)polymers to contain at least one SiH or vinyl group per unit, each unit corresponding to two

originally used monomers. Such adhesives are disclosed in the accompanying specification DE 199 05 224.7, to which reference is expressly made in respect of this disclosure.

Alternatively, the adhesive for silicones may be a (co-)polymer or a mixture of (co-) polymers containing silanol groups



wherein X = OH, -O-R_c or radicals of the formulae -O-CO-R_c, -NR_d-R_c, -NR_d-CO-R_c, and the moieties R_c, and R_d or the free bonds at the Si atom each independently of the others may be H atoms, OH groups, alkyl groups, alkoxy groups or aryl groups. It is especially preferred for the radicals of formulae -O-R_c, -O-CO-R_c, -NR_d-R_c, -NR_d-CO-R_c to be readily hydrolysable radicals. Such groups of formula X are also disclosed in the accompanying Patent Application "Adhesion promoters for silicone materials", Attorney Ref. No. 9817, filed at the German Patent and Trade Mark office on 07.04.1999, to which reference is also expressly made in respect of this disclosure.

According to a preferred embodiment, the partially resolvable (co-)polymers and/or the adhesives for silicones are dissolved or partially dissolved in at least one readily volatile inert solvent. An aliphatic or aromatic, halogenated or non-halogenated hydrocarbon, ether, ketone, ester or cyclic siloxane may be used as solvent.

The silicone composition d) may be, for example, a silicone impression composition for taking impressions of teeth.

In the kit of parts according to the invention, components a), b), optionally c) and optionally d) can be separated, for example they may be present in separate containers, such as bottles or cans. The base body may also be packed separately in a different manner.

By means of such adhesive systems for silicone compositions, especially for adhesion to composite moldings, an intimate bond is produced between the silicone composition and the composite moldings.

According to the invention there is also provided a method of manufacturing a molding, such as an impression tray, in which a) a solution of at least one partially resolvable (co-) polymer

is applied to at least one surface of a base body, b) the partially resoluble (co-)polymer(s) is/are dried, c) a solution of at least one adhesive for silicones is applied to the layer of the partially resoluble (co-) polymer(s), d) the adhesive(s) for silicones is/are dried, and e) optionally a silicone composition is applied to the adhesive(s)

That method can be carried out, for example, by a dentist, a dental technician or a dental assistant, moreover, according to the invention an impression tray is provided which can be manufactured according to the method described above.

The partially resoluble (co-)polymers used in step a) and/or the adhesives for silicones used in step c) are, according to a preferred embodiment, dissolved in at least one of the above-mentioned readily volatile inert solvents.

An impression tray according to the invention having improved adhesion of silicone compositions to composite moldings, especially a corresponding individual photocured impression tray, can be manufactured especially as follows:

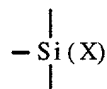
1. solutions of partially resoluble polymers are applied to the composite surface and dried so that they adhere to that composite surface; and
2. adhesive solutions for curable silicones are applied to the layer of the partially resoluble polymers and dried so that they adhere to the partially resoluble polymer surfaces, so enabling an intimate bond between a silicone composition that is to be applied and the partially soluble polymer surface.

For example, individual impression trays can be used according to the invention. Individual impression trays, which may also comprise dimethacrylates to which fillers have been added, are generally initially in the form of prefabricated photo-curable plates and are shaped on a plaster model to form an individual impression tray and are photo-cured. After removal of the oxygen-inhibiting lubricating layer with ethanol, according to the invention, for example, a thin film of a partially soluble polymer is applied to the surface of the individual impression tray. This is effected easily by applying the polymer dissolved in readily volatile inert solvents.

As described above, base bodies, such as methacrylate base bodies, that have been treated with partially soluble polymers are treated according to the invention in a second step with silicone adhesion promoters (primers), as described, for example, in the accompanying Patent Application DE 199 05 224.7 or in Patent Application DE 196 35 696 A1 or in Patent Specification EP 0 632 060 A1 for addition-crosslinking systems (A), or as also described, for example, in the accompanying Patent Application "Adhesion promoters for silicone materials", Attorney Ref. No. 9817, filed at the German Patent and Trade Mark Office on 07.04.1999, for condensation-crosslinking systems (C).

Suitable primers (A) for coating base bodies, especially individual photo-cured impression trays, with addition-crosslinking impression compositions may be solutions of adhesive polymers that comprise a sufficient amount of SiH or vinyl groups and that can dissolve adequately in the applied polymer surface of the dimethacrylate base body, sufficiently volatile solvents being used. Impression trays treated in that manner are ready and suitable for strong adhesion of addition-crosslinking silicones.

Suitable primers (C) for coating impression trays with condensation-crosslinking impression compositions may be, for example, solutions of polymers comprising a sufficient amount of silanol groups



wherein X = OH, -O-R_c, -O-CO-R_c, -NR_d-R_c, -NR_d-CO-R_c, and the moieties R_c and R_d are as defined above, the solutions of the polymers being able to dissolve adequately in the applied polymer surface (1st layer) of the dimethacrylate impression tray and the solvents used being sufficiently volatile. Impression trays treated in that manner are ready and suitable for strong adhesion of condensation-crosslinking silicones to that surface.

The kit of parts and impression tray according to the invention can be used for medical applications, especially for dental applications, their use as impression trays for silicone compositions being especially preferred. The impression compositions used are, for example, silicone compositions for taking impressions of teeth.

In the case of individual impression trays, the trays prepared in that manner can be charged directly with impression composition of the appropriate curing type at the dentist's and inserted into the mouth in order for the impression to be taken. On removal of the charged impression tray, the impression composition and the impression tray remain securely bonded. Portions of the cured impression composition do not become detached from the impression tray, and corresponding distortions and defective impressions do not occur. Attempts to remove the impression composition from the impression tray result in impression material breaking away.

Many other applications of bonding silicones to crosslinked methacrylate plastics are conceivable and in line with the invention.

For example, with the aid of the adhesive system according to the invention flexible silicone gum masks can be secured at the lower edge of composite-lined dimethacrylate-based dental crowns or bridges or temporary crowns or bridges in order to cover up insufficient gingival margins.

Moreover, where patients have contact allergies to contents of composites, the composites can be coated according to the procedure of the patent with a thin layer of curing silicone, or composite moldings in industrial applications can be coated in a manner according to the patent and flexibly bonded lastingly with a silicone adhesive.

EXAMPLES

Adhesion of an addition-crosslinking silicone impression composition to a photo-curable individual impression tray

A photo-curable impression tray plate (Megatray, made by Megadenta, Germany) is shaped on a plaster model to form an impression tray and is photo-cured for 3 minutes in an irradiation unit (Megaflash, made by Megadenta). The oxygen-inhibiting layer on the surface is removed from the inner face of the resulting impression tray by means of an alcohol-impregnated cloth.

A 15% solution of a soluble polymer powder (polymethyl methacrylate MW332, made by Röhm, Germany) in toluene is prepared and this is applied thinly to the cleaned inner face of the impression tray and is left to dry.

The silicone adhesion primer corresponding to Example 2 of the accompanying Patent Application DE 199 05 224.7 is then applied to the so treated inner face and is dried. The impression tray is then loaded with the addition-crosslinking silicone pre-impression composition R-si-line putty (R-Dental, Germany) and an impression is taken in the mouth of the teeth of an upper jaw. After curing, the impression tray with the cured impression composition is removed without a trace of the silicone becoming detached from the inner face of the impression tray. The impression composition is bonded securely to the impression tray and can be removed only by destroying the impression composition.

We claim:

1. A kit, comprising:
 - a) at least one partially resoluble (co-)polymer; and
 - b) at least one adhesive for silicones.
2. The kit according to claim 1 further comprising a base body.
3. The kit according to claim 2 further comprising a silicone composition.
4. The kit according to claim 2 wherein the base body comprises polymers or copolymers of methacrylates.
5. The kit according to claim 2 wherein the base body additionally comprises fillers, such as glass powder.
6. The kit according to claim 2 wherein the base body is an impression tray, a dental crown, bridge, temporary crown, or a temporary bridge.
7. The kit according to claim 1 wherein the partially resoluble (co-)polymers comprise polystyrene, polycarbonate, poly(meth-)acrylate, polyvinyl chloride, polysulphone, polymethylpentene, polystyrene acrylonitrile or mixtures thereof.
8. The kit according to claim 7 wherein the poly(meth-)acrylates comprise polymers or mixed polymerisates of methyl, ethyl, propyl, butyl, neopentyl or tetrahydrofurfuryl esters of acrylic acids or methacrylic acids.

9. The kit according to claim 1 wherein the adhesive for silicones is a (co-)polymer or a mixture of (co-)polymers containing at least one SiH, vinyl groups or silanol groups.

10. The kit according to claim 1 wherein the partially resoluble (co-)polymers and/or the adhesives for silicones are dissolved or partially dissolved in at least one readily volatile inert solvent.

11. The kit according to claim 10 wherein the solvent is an aliphatic or aromatic, halogenated or non-halogenated hydrocarbon, ether, ketone, ester, or cyclic siloxane.

12. The kit according to claim 3 wherein the silicone composition comprises a silicone impression composition for taking impressions of teeth.

13. The kit according to claim 1 wherein components a) and b) are present in separate containers.

14. The kit according to claim 2 wherein components a), b), and c) are present in separate containers.

15. The kit according to claim 3 wherein components a), b), c), and d) are present in separate containers.

16. A method of manufacturing a molding, comprising the steps of:

a) applying a solution of at least one partially resoluble (co-)polymer to at least one surface of a composite;

b) drying the partially resoluble (co-)polymer(s);

c) applying a solution of at least one adhesive for silicones to the layer of the partially resoluble (co-)polymer(s); and

d) drying the adhesive(s).

17. The method of manufacturing a molding according to claim 16 further comprising applying a silicone composition to the adhesive(s).
18. The method of manufacturing a molding according to claim 16 wherein the partially resolvable (co-)polymer and/or adhesive for silicones are dissolved in at least one solvent.
19. The method of manufacturing a molding according to claim 18 wherein the solvent is a readily volatile inert solvent.
20. The method of manufacturing a molding according to claim 19 wherein the partially resolvable (co-)polymers comprise polystyrene, polycarbonate, poly(meth-)acrylate, polyvinyl chloride, polysulphone, polymethylpentene, polystyrene acrylonitrile or mixtures thereof.
21. The method of manufacturing a molding according to claim 20 wherein the poly(meth-)acrylates comprise polymers or mixed polymerisates of methyl, ethyl, propyl, butyl, neopentyl or tetrahydrofurfuryl esters of acrylic acids or methacrylic acids.
22. The method of manufacturing a molding according to claim 16 wherein the adhesive for silicones is a (co-)polymer or a mixture of (co-)polymers comprise at least one SiH, vinyl group or silanol group.
23. A kit according to claim 16 wherein the composite is used for manufacturing a molding or an impression tray for silicone compositions.
24. A molding produced according to the process of claim 16.
25. A molding produced according to the process of claim 17.

Variable	Mean	SD	Min	Max
Age	34.5	10.5	18	65
Gender	0.5	0.5	0	1
Marital status	0.5	0.5	0	1
Education	12.5	1.5	9	16
Income	15.5	5.5	10	25
Health status	1.5	0.5	1	2
Stress level	2.5	1.5	1	4
Life satisfaction	3.5	1.5	1	5
Work engagement	4.5	1.5	1	5
Organizational commitment	4.5	1.5	1	5
Job satisfaction	4.5	1.5	1	5
Turnover intention	1.5	1.5	0	4
Organizational citizenship behavior	3.5	1.5	1	5
Employee well-being	3.5	1.5	1	5
Work-life balance	3.5	1.5	1	5
Job design	3.5	1.5	1	5
Supervisor support	3.5	1.5	1	5
Team cohesion	3.5	1.5	1	5
Organizational culture	3.5	1.5	1	5
Leadership style	3.5	1.5	1	5
Employee engagement	3.5	1.5	1	5
Job satisfaction	3.5	1.5	1	5
Organizational commitment	3.5	1.5	1	5
Turnover intention	1.5	1.5	0	4
Organizational citizenship behavior	3.5	1.5	1	5
Employee well-being	3.5	1.5	1	5
Work-life balance	3.5	1.5	1	5
Job design	3.5	1.5	1	5
Supervisor support	3.5	1.5	1	5
Team cohesion	3.5	1.5	1	5
Organizational culture	3.5	1.5	1	5
Leadership style	3.5	1.5	1	5
Employee engagement	3.5	1.5	1	5
Job satisfaction	3.5	1.5	1	5
Organizational commitment	3.5	1.5	1	5
Turnover intention	1.5	1.5	0	4
Organizational citizenship behavior	3.5	1.5	1	5
Employee well-being	3.5	1.5	1	5
Work-life balance	3.5	1.5	1	5
Job design	3.5	1.5	1	5
Supervisor support	3.5	1.5	1	5
Team cohesion	3.5	1.5	1	5
Organizational culture	3.5	1.5	1	5
Leadership style	3.5	1.5	1	5
Employee engagement	3.5	1.5	1	5
Job satisfaction	3.5	1.5	1	5
Organizational commitment	3.5	1.5	1	5
Turnover intention	1.5	1.5	0	4
Organizational citizenship behavior	3.5	1.5	1	5
Employee well-being	3.5	1.5	1	5
Work-life balance	3.5	1.5	1	5
Job design	3.5	1.5	1	5
Supervisor support	3.5	1.5	1	5
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Employee engagement	3.5	1.5	1	5
Job satisfaction	3.5	1.5	1	5
Organizational commitment	3.5	1.5	1	5
Turnover intention	1.5	1.5	0	4
Organizational citizenship behavior	3.5	1.5		

C

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled ADHESIVE SYSTEM FOR SILICONES, the specification of which

- ☒ is attached hereto.
- ☐ was filed on _____ as United States application number _____ and amendment on _____.

I do not know and do not believe that the invention was ever known or used in the United States before my or our invention thereof;

I do not know and do not believe that the invention was ever patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application;

I do not know and do not believe that the invention was in public use or on sale in the United States more than one year prior to this application.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT international application which designated at least one country other than the United States, listed below, and I have also identified and listed below any foreign application(s) for patent or inventor's certificate, or PCT international application, having a filing date before that of the application(s) on which priority is claimed:

FOREIGN APPLICATION(S)

Number	Country	day/month/year filed	Priority Claimed
DE 199 16 131.3	Germany	09/04/99	X

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any U.S. provisional application(s) listed below:

U.S. PROVISIONAL APPLICATION(S)

Application Serial No.	Filing Date

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or under Section 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

PRIORITY U.S. APPLICATION(S)

Application Serial No.	Filing Date	Status

POWER OF ATTORNEY

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Brian J. Laurenzo (Registration No. 34,207) and Michael C. Gilchrist (Registration No. 40,619).

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dr. Jürgen Engelbrecht

Inventor's Signature

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